



The Future of SYIC is infinite

Accessories for Machining Center, Milling Machine & Lathe

SHINTAI MACHINE TOOLS CO., LTD.

COMPANY
PROFILE

2018

www.syic.com

SYIC

SHINTAI MACHINE TOOLS

www.syic.com

2018

History and Background



WHO WE ARE

Shin-Yain Industrial Co., Ltd. is a professional manufacturer of machine tools and accessories. Established in 1979, presently, SYIC has 5 factories, specializing in manufacturing precision BT(MAS403/JIS B6339), DAT(DIN69871), CAT(ANSI B5.50), HSK(DIN69893), VDI(DIN ISO10889) tool holders, collets, angel head holder, oil hole holder, cutting tools, Z axial preset gauges, PSC Polygonal Taper Tool holders, etc. Our products can be used for CNC lathes, machine centers and milling & turning machines, etc. For nearly 40 years, SYIC sticks to provide the best products with a principle, "Quality creates reputation; reputation ensures quality."

WHAT WE DO

Now SYIC has produced 120 kinds of products with more than 10,000 types. Owning 5 factories, we have high production efficiency and very sufficient stock that makes us able to offer the best delivery. Besides, we focus on the Quality Control a lot that we set up an individual inspection department and instrument department in charge of Q.C. of T.I.R., surface roughness, roundness, taper tolerance, etc. For pursuing better and better quality, we invest to purchase good instruments, such as 3D Tester (Zeiss, Made in Germany), Air Gauges (DSK, Made in Japan), Roundness Testing Machine (Mitutoyo, Made in Japan), etc.

Concerning the manufacturing equipment, currently we have CNC lathes, CNC Machining Centers, Internal and External Grinding Machines, CNC 5 Axis Machining Center, Automatic feeding equipment, etc.

In addition to good equipments, SYIC has established R&D department, being responsible for new product development and improvement. Each year, we develop new and advanced products fit for the market. Currently, we have got 147 Taiwan patents and 183 overseas patents.

SYIC is an ISO9001 and ISO14001 certified company. With the accreditation of ISO9001 Quality Management System and ISO14001 Environmental Management System, we successfully promote our products to the international market with the brand of "SYIC." Now by the effort of all of our 450 professional staff, it's established a strong image for customers that SYIC is the leading tool holder and cutting tool manufacturer that offers the best manufacturing solutions in the industry.

In order to offer more better customer service, SYIC has set up its own branch company in Thailand from 2009 Shintai Machine Tool Co., Ltd. And it will offer the best after-sale services and technical support to every customer in Thailand constantly!





Patents and Awards

**Taiwan patent:
147 pieces
Foreign patent:
183 pieces**



Factories in Taiwan



Factory A in Taiwan

Floor area: 31,000 square feet

Production line: Internal & external grinding machine



Factory B in Taiwan

Floor area: 45,000 square feet

Production line: CNC turning machine, mill-turn machine & 5 axis machining center



Factory C in Taiwan

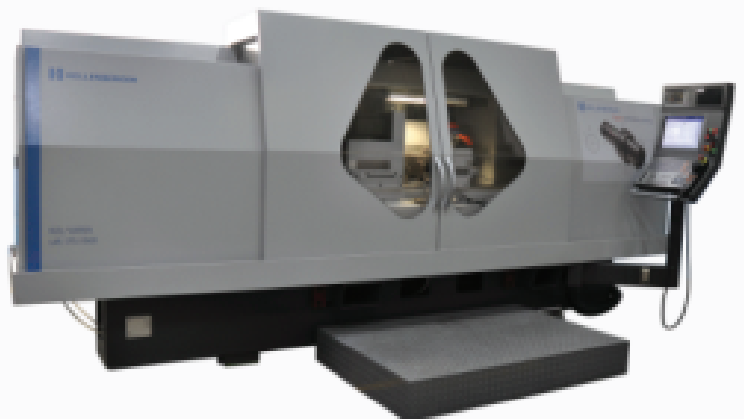
Floor area: 28,400 square feet

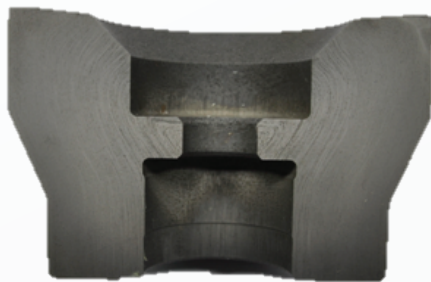
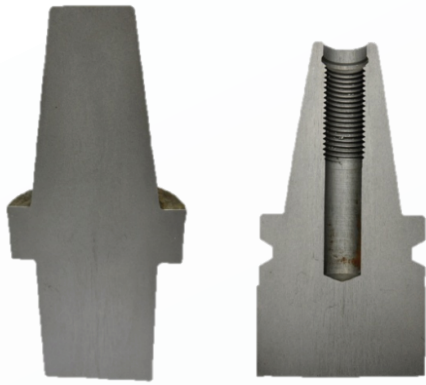
production line: CNC turning machine & 4 axis machining center





Manufacturing equipment & inspection instruments



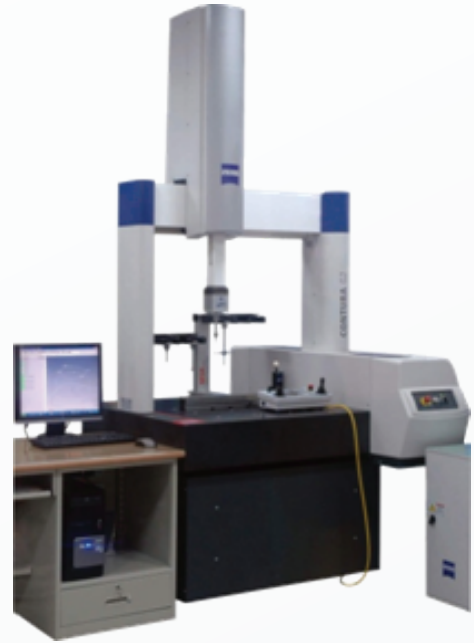


Forging machine

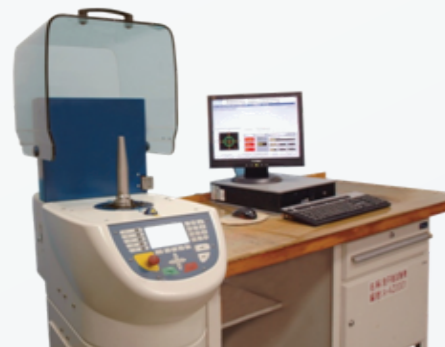
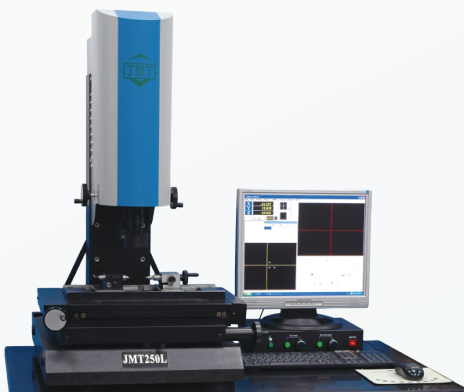
Quantity: 4

Item: Forging improves
the strength and rigidity
of the metal
(tool holders
and cutting tool)

Inspection instruments



Coordinate Measuring Machine (Zeiss, Germany)
Roundness Tester (Germany & Japan)



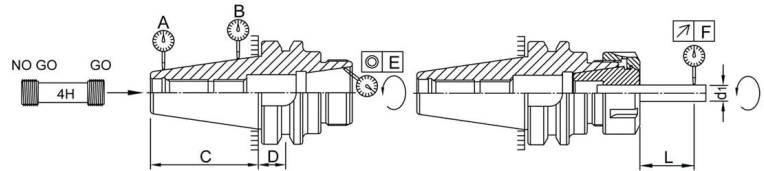
Tool Presetter (Germany)
Balance Machine (Germany)
2D Vision Measuring Instrument
Roughness Tester

Quality Control

Take BT/ER tool holders for example



Inspection Report



Unit : mm

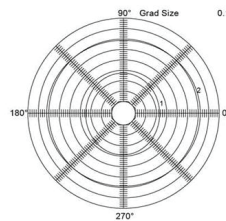
Commodity		BT / ER COLLET CHUCK	
Item Examined		Approved Tolerance	Test Value
<input type="checkbox"/> BT30	A	+0.001 +0.0005	
	B	+0.002 +0.001	
<input type="checkbox"/> BT40 <input type="checkbox"/> BT50	A	+0.002 0	
	B		
C		±0.2	
D		±0.1	
⊙E		0.001~0.003	
↗F		0.001~0.02	

d1 END MILL DIAMETER	L END MILL LENGTH	DIN ISO 15488 Standard Concentricity
3.0~6.0	16	0.015
6.1~10.0	25	0.015
10.1~18.0	40	0.02
18.1~27.0	50	0.02
27.1~34.0	60	0.02

Type	≤AT3 Angular Tolerance of Taper				Taper
	ATa		ATD	L	
	μrad	sec	μm		
BT30	40	8"	2	48.4	
BT40	40	8"	2.6	65.4	
BT50	40	8"	4	101.8	
ATD (μm) = ATa (μrad) xo.0o.1xL (mm) 5μrad=1°300μrad=1°					

ATD (μm) = ATa (μrad) x 0.001xL (mm) 5μrad=1°300μrad=1'

Measurement Mode: Coaxiality

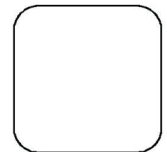


MEASUREMENT RESULTS:

Coaxiality(I): 1.9μm
V.Dir (Ref to Subj): 170.1°
Coax Slope: 0.01 μm/mm
V.Dir Slope: 293.2°
Tolerance: 5.00 μm
Roundness(1): 0.35 μm(ID)
Concentricity: 0.18 μm
Height: 148.00 mm
Radius: 6.50 mm
Roundness(2): 0.19 μm(ID)
Concentricity: 0.19 μm
Height: 176.00 mm
Radius: 15.50 mm
Comment:
AXIAL DISPLACEMENT

CONDITIONS:

Filter: 2RC 0-15UPR
Ref Circle: LSC
Datum: Established Axis
Tip Rad: 0.80mm
Ratio: 1:1



Item

Taper Tolerance (A)

Taper Tolerance (B)

Distance(C)

Inclination of surface(D)

Concentricity (E)

T.I.R. (F)

Measuring Instrument

Air Gauge by DSK Japan or

Measuring Gauge

Air Gauge by DSK Japan or

Measuring Gauge

Measuring Gauge

Height gauge

Dial gauge

Dial gauge & Test bar



Product Category

By SYIC



Cutting tools



Angle head holders



Tool holders



Boring series



Collets

PSC Turning Holder & PSC80 Customized Turning Holder



PSC turning holder has been sold into Germany,
Japan and China markets successfully.
Sales amount in 2017 has been double compared to 2016.





PNER COLLET CHUCK SYSTEM



▶ PNER nut decreases wind shear at high speed.



▶ The design of straight parts above and below the threads improves T.I.R and machining stability.



▶ Use PNER sealed nut and sealed ring for coolant through cutters.



- ▶ Roundness $< 0.6 \mu\text{m}$
- ▶ Surface roughness $R_a < 0.2 \mu\text{m}$

▶ Recommended clamping range of tool shank: h7



PNER 可應用刀具
Application tools of PNER



PNER-3μ 刀桿
PNER-3μ Collet Chuck



PNER 筒夾
PNER Collet



鑽頭
Drill
銼刀
Reamer
鎢鋼銑刀
Tungsten steel cutter
直角銑刀
End Mills
全 R 端銑刀
Ball end mills
圓刃端銑刀
Rounded corner end mills

HEAVY
DUTY
MACHINING

HIGH
RIGIDITY

HIGH
PRECISION

3μm



台灣精品2017
TAIWAN EXCELLENCE



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Pursuing better precision and rigidity?
PNER 3μm is your best choice!

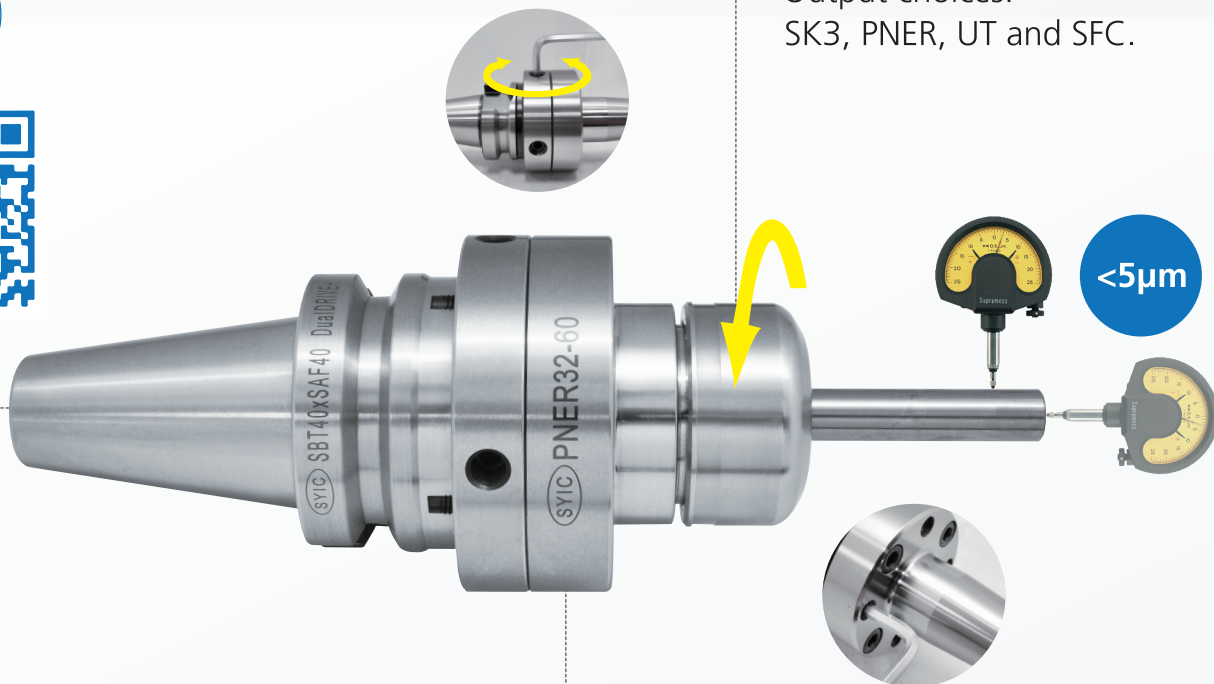




SAF RUNOUT ADJUSTABLE HOLDER



► Output choices:
SK3, PNER, UT and SFC.



► BT/GBT, CAT/SCAT, DAT/SDAT,
HSK and PSC are available.

► T.I.R can be adjusted within 5µm.

PRECISION
ADJUSTBLE

5µm



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Remove the accumulated
tolerance and remain the precision
within 5µm.





STA SYNCHRONIZED TAPPING HOLDER



▶ BT / SBT, CAT / SCAT, DAT / SCAT, HSK and PSC are available.

▶ Modular design of tap holder body with adapter lowers purchase cost.

▶ The special structure design compensates the axial inaccuracy when tapping and improves thread quality.

▶ Longer adapters can be custom made to avoid interference.



▶ Can be used for coolant-through tap.

▶ The tap use life is increased by at least 2 times compared to traditional tapping system.

▶ Tap capacity:
M3~M5, M3~M16
M3~M6, M6~M18, M3~M12

COMPENSATION
FOR
INACCURACY

BETTER TAP
USE LIFE

COOLANT
THROUGH



www.syic.com

STA compensates mis-feed and
improves tap use life by at least
two times!

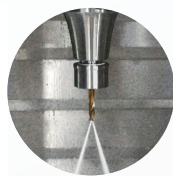




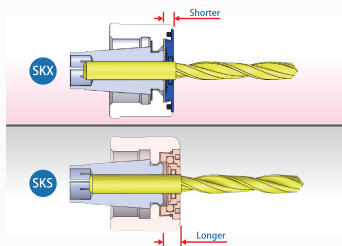
SKX COLLET CHUCK SYSTEM



- ▶ Withstand coolant pressure up to 70 bar.



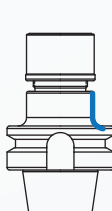
- ▶ Shorter tool overhanging length!



- ▶ Easy operation.



- ▶ Better rigidity and less vibration for curve line design!



Standard length



Length over 120mm

- ▶ Tool holders and collets are compatible with other brand, and also spanner.

Convenient!

HIGH
SPEED

HIGH
RIGIDITY

HIGH
PRECISION

5 μ m



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Capable of high pressure 70 bar
and better compatibility.





SK3 COLLET CHUCK SYSTEM

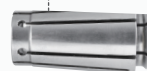


- ▶ Dust proof design with o-ring.



- ▶ Slim design reduces interference.

- ▶ Accuracy 5 μ m
4° design has better rigidity and accuracy stability.



- ▶ Nut w/o slots decreases wind shear at high speed.



HIGH
SPEED

HIGH
RIGIDITY

HIGH
PRECISION

5 μ m



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Increasing machining efficiency starts
from SK3 collet chuck.





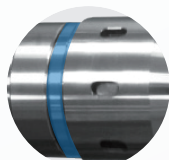
MLD MULTI-LOCK MILLING CHUCK SERIES

HIGH RIGIDITY AND DUST PROOF

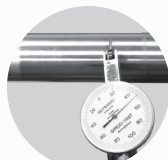
- ▶ Nut and flange contact firmly to increase rigidity and achieve the function of dust proof.
- ▶ Featured with high precision and easy-to-fasten, vibrations do not occur at high speed machining or heavy duty machining.



CONCENTRICITY WITHIN 5μm

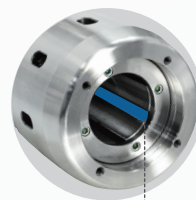


- ▶ 100% contact.



- ▶ Concentricity is within 5μm at 4D length.

NEEDLE BEARING CAGE



- ▶ Special slots achieve higher clamping force and less vibration.

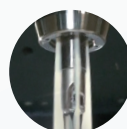
MLD SYSTEM



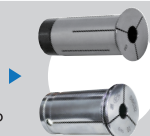
COLLET



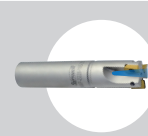
GENERAL TOOL



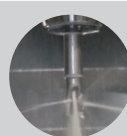
SEALED CAP



COLLET



COOLANT
THROUGH
TOOL



HEAVY
DUTY
MACHINING

HIGH
STABILITY

5μm



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TAIWAN EXCELLENCE



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**Superior milling chuck for
heavy-duty machining.**





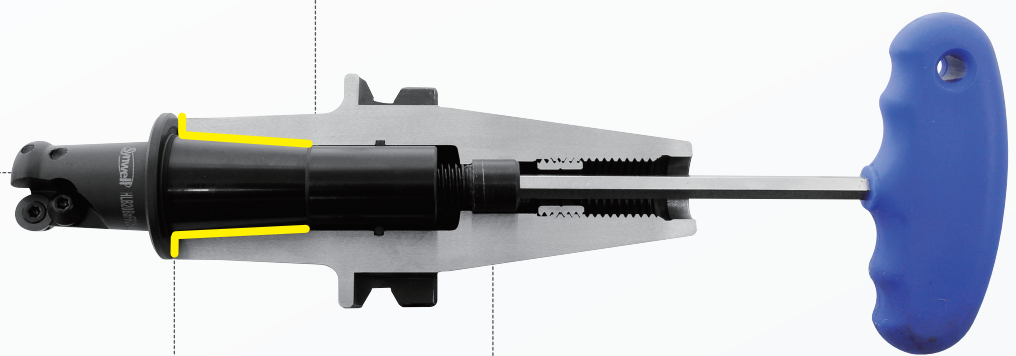
HBL COLLET CHUCK+ HLB FACE CONTACT TYPE CUTTING TOOLS



► Modular design reduces the purchase cost of tool holder. Applicable for various kinds of processing.

► HLB CUTTING TOOL-ONE PIECE DESIGN WITH SLC COLLET TAPER

The taper of HLB cutter remains 4° slanted design, which improves holding power, concentricity and rigidity.



► Two-face contact between collet taper, collet flange and the end of HBL tool holder, increasing the rigidity of machining.

► HLB drawbar clamping design strengthens the axial clamping force.

MODULAR
SYSTEM

TWO FACE
CONTACT

DRAWBAR
CLAMPING
DESIGN



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**Providing you high rigidity and
versatile machining at one time!**





SAG ANGLE HEAD HOLDER [SLIM TYPE]



▶ Withstand coolant pressure up to 7kgf/cm².

▶ Standard 40-taper, HSK63A can be customized on request.

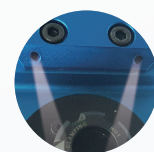
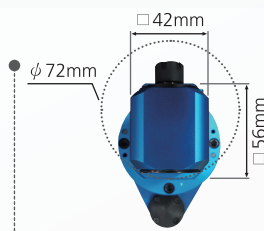
▶ 5.5kg, suitable for ATC.
Max. revolution: 6,000 rpm;
Max. torque: 15 N-m.

▶ Graduated scale allows easy adjustments.

▶ Gear ration 1:1.

▶ Slim design reduces interference for better deep hole processing.

▶ 90 degree design makes lateral cutting easy and improves efficiency.



▶ Output: ER11 and SBL6.
▶ Suitable for light machining.



HIGH
SPEED

HIGH
RIGIDITY

HIGH
PRECISION

5μm



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SAG **slim design** is free of interference.

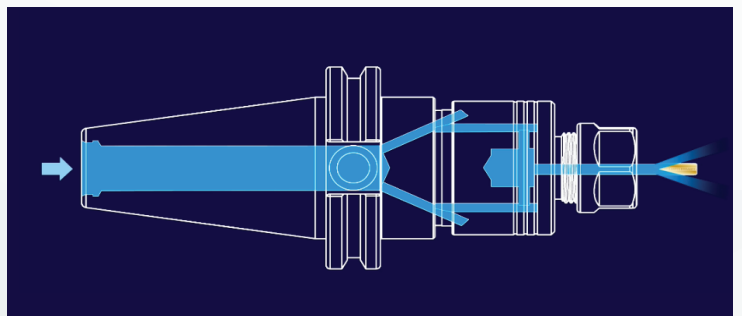
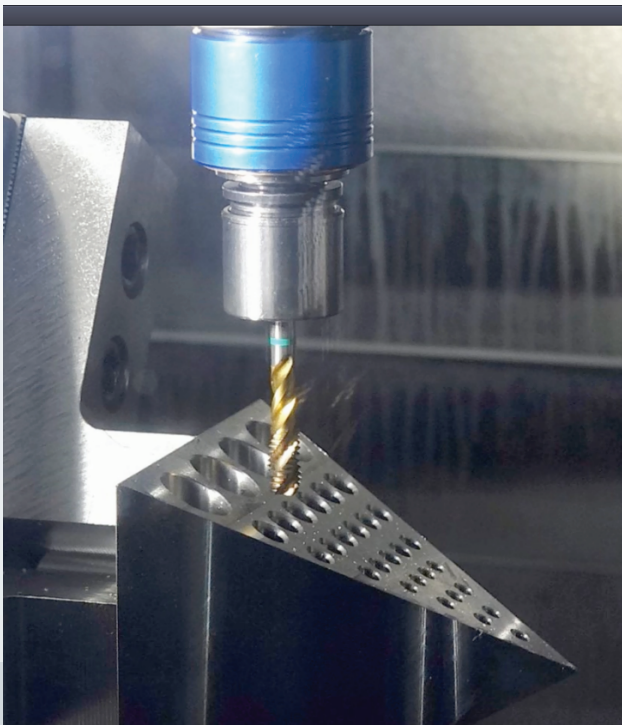
ANGLE HEAD
▶ Read the operation manual
before use
▶ Gear ratio 1:1
▶ Max. revolution 6000rpm



STA Synchronized Tapping Holder



Compensates the mis-feed from spindle ballscrew
and overload during rigid tapping.
Improves tapping quality and tap life by at least 200%.





Applicable Industries

Automobile spare parts industry

Module and Aerospace processing industry

IT processing industry

Aluminum processing industry

Construction Machinery

Shintai Machine Tools Co., Ltd.,
as a member of SYIC group

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